NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Winston-Salem Regional Office
County: Rockingham
NC Facility ID: 7900015
Inspector's Name: Robert Barker
Date of Last Inspection: 03/05/2020
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Duke Energy Carolinas, LLC - Dan River Combined Cycle Facili

Facility Address:
Duke Energy Carolinas, LLC - Dan River Combined Cycle Facili
864 South Edgewood Road
Eden, NC 27288

SIC: 4911 / Electric Services
NAICS: 221112 / Fossil Fuel Electric Power Generation

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02Q .0400 (40 CFR Parts 72 and 75)
NSPS: NA
NESHAP: NA
PSD: NA
PSD Avoidance: NA
NC Toxics: NA
112(r): NA
Other: NA

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Dana Newcomb Manager, Env. Services (336) 635-3186 864 South Edgewood Road Eden, NC 27288	Terry Tuck VP Natural Gas Generation (704) 382-2025 864 South Edgewood Road Eden, NC 27288	Erin Wallace Lead Environmental Specialist (919) 546-5797 410 South Wilmington Street Raleigh, NC 27601

Application Data

Application Number: 7900015.20B (TV renewal) and 7900015.20A (TIV renewal)
Date Received: 05/29/2020
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 03455/T31
Existing Permit Issue Date: 03/28/2016
Existing Permit Expiration Date: 02/28/2021

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	9.72	272.76	33.10	98.97	151.82	2.00	1.33 [Formaldehyde]
2018	10.96	249.18	36.81	107.94	170.20	2.24	1.49 [Formaldehyde]
2017	10.36	259.83	42.28	113.02	166.37	2.19	1.46 [Formaldehyde]
2016	10.39	232.60	36.61	107.45	163.84	2.15	1.43 [Formaldehyde]
2015	9.93	149.43	34.45	100.82	157.32	2.05	1.36 [Formaldehyde]

Review Engineer: Ed Martin

Review Engineer's Signature: **Date:**

DRAFT FOR PUBLIC NOTICE

Comments / Recommendations:
Issue 03455/T32
Permit Issue Date:
Permit Expiration Date:

Chronology

May 20, 2020	Title IV renewal application 7900015.20A received.
May 29, 2020	Title V renewal application 7900015.20B received.
July 23, 2020	The draft permit and review were sent to Erin Wallace at DEC, Robert Barker at WSRO and Samir Parekh with SSCB.
July 29, 2020	Comment provided by Samir Parekh.
September 1, 2020	DEC's comments on the draft permit were received.

I. Purpose of Application

This permit application is to renew the existing Title V permit pursuant to 02Q .0513. The renewal application was received on May 29, 2020, at least six months before the permit expiration date of February 28, 2021. Therefore, the application to renew the permit was filed in a timely manner and the application shield pursuant to 15A NCAC 02Q .0512(b)(1) remains in effect. This renewal permit is being issued for another 5-year term and will expire 5 years from the date of issuance.

No modifications to the permit were requested by Duke Energy Carolinas, LLC (DEC) in the renewal application, except to add the following insignificant activities:

- One 250 kW (335 hp), No. 2 fuel oil-fired emergency engine to act as backup power for the landfill leachate tank system and an associated 1,100 gallon fuel tank
- Two seven million Btu per hour Piedmont Natural Gas natural gas-fired heaters
- Cold solvent parts washer (85 gallon maximum capacity)
- Three 74 hp diesel-fired, emergency-use stormwater pumps
- One 250 gallon propane tank for the microwave tower emergency engine
- In a letter dated August 17, 2020, DEC requested the addition of a new insignificant activity to operate with the Heat Recovery Steam Generator exhaust stack drain pipe penetration seals' weep holes plugs removed for turbines ES-11 and ES-12. Estimated emissions are calculated to be 25.57 lb/yr of NOx and 23.95 lb/yr of CO. These potential emissions are less than five tons per year for each criteria pollutant and meets the definition of insignificant activities per 15A NCAC 02Q .0503.

This permit change is a significant Title V permit modification that does not contravene or conflict with a condition in the existing permit pursuant to rule 15A NCAC 02Q .0501(b)(1). Public notice of the draft permit is required.

The following application was consolidated with this application:

Application 7900015.20A (consolidated with Application 7900015.20B)
Duke has submitted a renewal Acid Rain Permit Application for combustion turbines ES-11 and ES-12. The revised Acid Rain Application, dated May 19, 2020, was received May 20, 2020 in a letter dated May 19, 2020 to Lisa Edwards at the Winston-Salem Regional Office.

II. Permit Changes

The following changes were made to the Duke Energy Carolinas LLC Dan River Combined Cycle Facility Air Permit No. 03455T31:

Page	Section	Description of Changes
Cover		Amended permit numbers and dates.
Insignificant Activities List		Added sources I-78 through I-83. Removed I-77 and I-ASH. Changed I-78 from 1100 gallon to 640 gallon.
TOC		Changed Acid Rain Permit Application date.
6	2.1.A.3.h	Revised reporting.
9	2.1.A.4.f	Revised monitoring for NOx.
10	2.1.A.4.i	Revised reporting.
18	2.2	Removed effective dates. The effective dates are the same as the Title V permit. Changed Acid Rain Permit Application date.
21-30	3	Updated General Conditions to version 5.5, 08/25/2020.

III. Permit History

There have been no permit changes since the previous Title V permit renewal (T31).

IV. Facility Description

Duke Energy's Dan River Steam Station is an electric utility plant that generates electrical power using combustion turbines. The Dan River facility has two natural gas-fired combined-cycle combustion turbines (ID Nos. ES-11 and ES-12), one multi-cell cooling tower for condensing the heat recovery steam generator turbine exhaust steam (ID No. ES-13), one natural gas-fired auxiliary boiler (ID No. ES-14), one No. 2 fuel oil-fired emergency generator (ID No. ES-15), and one No. 2 fuel oil-fired emergency firewater pump (ID No. ES-16).

V. Emissions and Regulatory Analysis

Duke is subject to the following source-by-source regulations, in addition to the requirements in the General Conditions:

A. Two natural gas-fired combined-cycle combustion turbines (ID Nos. ES-11 and ES-12), each equipped with dry low-NOx combustors, a heat recovery steam generator (HRSG) with a natural gas-fired duct burner, a common steam turbine generator supplied by the two HRSGs, associated selective catalytic reduction (SCR) (ID Nos. C11A and C12A), and associated CO/VOC oxidation catalyst (ID Nos. C11B and C12B)

1. <u>15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS</u>
   Emissions of particulate matter from the combustion of natural gas that are discharged from the duct burners associated with these turbines into the atmosphere shall not exceed 0.136 pounds per million Btu heat input when the duct burners are in service.

This rule applies to installations burning fuel, including natural gas and fuel oils, for the purpose of producing heat or power by indirect heat transfer. The affected sources to which this regulation applies are the two combustion turbines ES-11 and E-12 and the auxiliary boiler ES-14. For the purpose of this Rule, the maximum heat input shall be the total heat content of all fuels which are burned in a fuel burning indirect heat exchanger, of which the combustion products are emitted through a stack or stacks. The sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each fuel burning indirect heat exchanger. Fuel burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a fuel burning indirect heat exchanger shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been established. However, for any fuel burning indirect heat exchanger constructed after, or in conjunction with, the removal of another fuel burning indirect heat exchanger at the plant site, the maximum heat input of the removed fuel burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any fuel burning indirect heat exchanger constructed after or in conjunction with the removal. The emission rate for these sources was determined in the review for permit T27 when, at that time, the new turbines ES-11 and ES-12 and new auxiliary boiler ES-14 were added to the permit. Also, the existing Boiler 1 (ES-1) and existing Boiler 2 (ES-2) were required to be shutdown prior to startup of combustion turbines (ES-11 and ES-12) under a 15A NCAC 2Q .0317 PSD avoidance condition.

The following facility-wide heat inputs as established in the T27 review are to be used in accordance with the above 15A NCAC 02D .0503 language even though auxiliary boiler ES-9 was removed and the heat input for auxiliary boiler ES-14 was changed from 50 mmBtu/hr to 36.74 mmBtu/hr in permit T30, since those changes do not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been established.

Source	Heat Input (mmBtu/hr)
Boiler 3 (existing*)	1710
Auxiliary Boiler ES-9 (existing*)	15
Auxiliary Boiler ES-14 (new*)	50
CT ES-11 (heat input from duct burner in HRSG (new*)	620
CT ES-12 (heat input from duct burner in HRSG (new*)	620
Total	3015

*At the time the 15A NCAC 02D .0503 limit was set in T27.

Allowable emissions of particulate matter from fuel combustion shall be calculated as follows:

$E = 1.090\ Q^{-0.2594}$

where: E = allowable particulate emission rate, pounds per million Btu
Q = maximum heat input rate (total at plant site), million Btu per hour

Therefore, emissions of particulate matter from the combustion turbines shall not exceed the following:

$E = 1.090\ Q^{-0.259}$
$= 1.090\ (3015)^{-2594}$
$= 0.136$ lb/mmBtu

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS
As sources manufactured after July 1, 1971, visible emissions from these turbines shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

No monitoring/recordkeeping/reporting is required for opacity from the firing of natural gas in these sources.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART KKKK - Standards of Performance for Stationary Combustion Turbines)
Subpart KKKK applies to combustion turbines with heat input at full load equal or greater than 10 mmBtu/hr that commenced construction, modification, or reconstruction after February 18, 2005. This subpart also applies to emissions from the associated heat recovery steam generators (HRSGs) and duct burners which are exempt from the requirements of NSPS Subpart Da, Db or Dc.

Emission Limits
These turbines will fire natural gas only. Emission limits (except during startup, shutdowns, and malfunction) for NOx are 15 ppm at 15 percent O_2 or 96 ppm at 15 percent O_2 when operating at less than 75 percent of peak load or operating at ambient temperature below 0°F. Emission limits (except during startup, shutdowns, and malfunction) for SO_2 are 0.06 lb/million Btu heat input.

Compliance with the applicable NOx emission limit must be demonstrated by using a NOx continuous emissions monitoring system (CEMS). Compliance with the applicable SO_2 emission limit must be demonstrated by showing that: (i) the total sulfur content for the natural gas is 20 grains of sulfur or less per 100 standard cubic feet and has potential sulfur dioxide emissions of less than 0.060 lb SO_2/mmBtu, or (ii) through representative fuel sampling data showing that the potential sulfur content of the fuel does not exceed 20 grains per 100 standard cubic feet.

4. 15A NCAC 02Q .0317: AVOIDANCE CONDITION
(Avoidance of 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION)
In order to avoid applicability of 15A NCAC 02D .0530(g), this condition contains emission limits for the combustion turbines for carbon monoxide, VOCs, nitrogen oxides, particulate matter, PM-10 and sulfuric acid. This condition was established in permit T27 when the turbines were first added and later revised in permits T30 and T31.

Federal-Enforceable Only
5. CROSS STATE AIR POLLUTION RULES (CSAPR) PERMIT REQUIREMENTS
These turbines are subject to the applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program", Subpart BBBBB "TR NOx Ozone Season Trading Program", and Subpart CCCCC "TR SO_2 Group 1 Trading Program".

6. 15A NCAC 02Q .0402 ACID RAIN PERMITTING PROCEDURES (40 CFR Part 72)
Duke submitted a renewal Acid Rain Permit Application, received May 20, 2020 (application 7900015.20A), for these turbines.

The effective dates of the acid rain portion of the permit are the same as the Title V permit itself. The Acid Rain Permit Application dated May 19, 2020 will become part of the Title V permit (as an attachment).

The applicable acid rain rules for the turbines, as specified in the Acid Rain Permit Application includes the following emission and monitoring requirements:

15A NCAC 02Q .0402 Acid Rain Procedures (40 CFR Part 72 Permits Regulation)
North Carolina air quality regulation 15A NCAC 02Q .0400 implements Phase II of the federal acid rain program pursuant to Title IV of the CAA as provided in 40 CFR Part 72. Issuance or denial of acid rain permits shall follow the procedures under 40 CFR Part 70 (Title V) and Part 72. If the provisions or requirements of Part 72 conflict with or are not included in Part 70, the Part 72 provisions and requirements shall apply and take precedence. SO_2 allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72; however, the sources must hold enough SO_2 allowances to cover their annual SO_2 emissions. Turbines ES-11 and ES-12 are *new units* since they commenced commercial operation on or after November 15, 1990, in accordance with the definition in 40 CFR Part 72. There are no NOx emission limits for gas or oil-fired units; however, NOx emissions monitoring is required.

15A NCAC 02Q .0402 Acid Rain Procedures (40 CFR Part 75 Continuous Emissions Monitoring)
This regulation establishes requirements for the installation, certification, operation, and maintenance of continuous emissions or opacity monitoring systems.

7. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING (40 CFR 64)
This facility is subject to a CAM analysis as required for renewal of a Title V permit. The CAM rule applies to each emissions unit (source) at a Title V facility if the individual emissions unit uses a control device to achieve compliance with a regulated air pollutant emission limit or standard, and if the potential pre-control emissions from that specific source are equal to or greater than the major source thresholds of the applicable regulated air pollutant. The two combustion turbines ES-11 and ES-12 employ selective catalytic oxidation (SCR) to control NOx emissions and use catalytic oxidation to control CO and VOC emissions. Each turbine has potential pre-control emissions greater than the major source threshold (100 tons per year) for each pollutant. No other sources in the permit use control devices.

NOx emissions from the turbines are limited under NSPS Subpart KKKK and under PSD avoidance. Emissions are monitored using CEMS, which meets the CAM exemption in 02D .0614(b)(1)(F) for emission limitations or standards for which a permit issued pursuant to 15A NCAC 02Q .0500 specifies a continuous compliance determination method.

CO and VOC emissions from the turbines are limited under PSD avoidance. The PSD avoidance limits were established as an emissions cap that was approved pursuant to the rules of 15A NCAC Subchapters 02D and 02Q and incorporated in a permit issued pursuant to 15A NCAC 02Q .0500 and therefore meet the exemption in 02D .0614(b)(1)(E).

Therefore, CAM does not apply to the Dan River facility.

B. One multi-cell cooling tower (ID No. ES-13)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES
Allowable emissions of particulate matter from any industrial process for which no other emission control standards are applicable shall not exceed the amounts calculated by the following equation:

$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons per hour

or

$E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons per hour

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

C. One natural gas-fired auxiliary boiler (ID No. ES-14)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS
   Emissions of particulate matter from the combustion of natural gas that are discharged from the auxiliary boiler into the atmosphere shall not exceed 0.136 pounds per million Btu heat input.

   See Section V.A.1 above for how the emission rate was established.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
   Emissions of sulfur dioxide from the auxiliary boiler shall not exceed 2.3 pounds of sulfur dioxide per million Btu heat input.

   No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS
   As a source manufactured after July 1, 1971, visible emissions from the auxiliary boiler shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

   No monitoring/recordkeeping/reporting is required for opacity from the firing of natural gas in this source.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units)
   Subpart Dc applies to the 36.74 mmBtu/hr auxiliary boiler since it is a steam generating unit for which construction commenced after June 9, 1989 and has a maximum design heat input capacity of greater than or equal to 10 mmBtu/hr, but less than 100 mmBtu/hr.

   Since the auxiliary boiler only burns pipeline-quality natural gas, the NSPS Subpart Dc emissions standards are not applicable. Therefore, the auxiliary boiler will only be subject to the recordkeeping and reporting requirements of 40 CFR 60.48c(a), (g) and (i). Duke must record and maintain records of the amount of fuel burned during each calendar month and submit semi-annual summary reports of the monitoring and recordkeeping activities.

5. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for
   15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS
   This condition is necessary to comply with the ambient air quality standards of 15A NCAC 2D .0400 for two reasons: (1) because Duke's ambient NAAQS modeling was performed based on a natural gas sulfur content of 0.006 lb/mmBtu which is much less than the permit limit of 2.3 lb/mmBtu, and (2) Duke modeled this source at 2000 hours per year; however, the permit does not otherwise restrict operation to anything less than 8760 hours per year. Therefore, the maximum sulfur content of the natural gas burned in the auxiliary boiler shall not exceed 2.0 grains of sulfur per 100 standard cubic feet, which corresponds to the modeling emission rate of 0.006 lb/mmBtu. The maximum annual hours of operation shall not exceed 2,000 hours per rolling consecutive 12-month period.

Duke must record monthly and report annually the hours of operation of the auxiliary boiler. Also, Duke must demonstrate compliance with 15A NCAC 2D .0501(c) by making a demonstration that the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifies that the total sulfur content for natural gas is 2.0 grains of sulfur or less per 100 standard cubic feet. Alternatively, the Permittee may demonstrate compliance through representative fuel sampling data showing that the potential sulfur content of the fuel does not exceed 2.0 grains per 100 standard cubic feet. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4 of Appendix D of Part 75.

D. Stationary internal combustion engines, including:

- **one No. 2 fuel oil-fired emergency generator (ID No. ES-15)**
- **one No. 2 fuel oil-fired emergency firewater pump (ID No. ES-16)**

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
   Emissions of sulfur dioxide from these engines shall not exceed 2.3 pounds of sulfur dioxide per million Btu heat input.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS
   As a source manufactured after July 1, 1971, visible emissions from the auxiliary boiler shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

   No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in these sources.

3. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART IIII - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)
   Subpart IIII applies to several categories of compression ignition (CI) engines. These engines are subject to this standard include one 1490 hp emergency generator (ID No. ES-15) and one 237 hp emergency firewater pump (ID No. ES-16) which are classified as emergency stationary internal combustion engines as defined in §60.4219.

   The emergency generator diesel engine has a displacement of less than 10 liters per cylinder and is a 2007 or later model year. The emergency generator provides power in emergency situations. This source must meet the requirements in §60.4202(a) of the standard. These standards are for emergency engines less than 3,000 hp but greater than 50 hp, and less than 10 liters per cylinder displacement. An emergency engine built for model year 2007 and later that is not a fire pump is subject to the emission limits of 40 CFR 89.112 and 40 CFR 89.113. The applicable smoke or opacity emission standards in §89.113 do not apply since the engines are constant speed engines.

   The emergency firewater pump engine has a displacement of less than 30 liters per cylinder. This source must meet the requirements in §60.4205(c) of the standard as shown in Table 4 of the standard.

   These emergency engines must be operated and maintained in accordance with the manufacturer's written instructions or procedures that are approved by the engine manufacturer. The emergency generators must be purchased certified to the emission standards and must be installed and configured according to the manufacturer's specifications. The sulfur content of the diesel fuel must be less than 15 ppm and each engine must be equipped with a non-resettable hour meter prior to startup.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(40 CFR Part 63, Subpart ZZZZ)
In accordance with 40 CFR 63.6590(c)(1), these engines located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 subpart IIII, as specified in Section V.D.3 above. No further requirements apply under 40 CFR Part 63, Subpart ZZZZ.

VI. Public Notice and EPA Review of the Draft Permit

Pursuant to 15A NCAC 02Q .0521, a notice of the draft Title V Operating Permit will be published on the DAQ website to provide for a 30-day comment period with an opportunity for a public hearing. Copies of the draft (proposed) permit, review and public notice will be sent to EPA for their 45-day review, to persons on the Title V mailing list, to the Winston-Salem Regional Office, and to the Permittee for review.

VII. Other Requirements

PE Seal
A PE seal is not required since no new control devices are being added.

Zoning
There is no expansion of the facility, therefore zoning consistency is not required.

Fee Classification
The facility fee classification after this modification will remain as "Title V" as before.

VIII. Comments on Draft Permit

The draft permit and review were sent to Erin Wallace at DEC, Robert Barker at WSRO and Samir Parekh with SSCB on July 23, 2020.

WSRO Report (email to Ed Martin dated June 5, 2020)
No comments were received from WSRO. However, Robert Barker previously had made a compliance inspection on March 5, 2020 and the following permit issues were discovered:

1. The cold solvent parts washer (I-77) is currently setting in a warehouse and is not used.
2. The propane-fired emergency generator (I-66) is subject to NESHAP Subpart ZZZZ and NSPS Subpart JJJJ in the permit. It should be noted that the emergency generator was installed in 2007. Since this is after June of 2006 (end date for Subpart ZZZZ) and before July of 2008 (start date for Subpart JJJJ), the emergency generator may not be subject to either regulation.
3. The facility has a 1,000,000 gallon leachate tank for the ash landfill.

DEC Comments
On September 1, 2020, DEC submitted the following comments (some refer to the above WSRO issues):

1. Remove insignificant activity for Ash Handling and Railcar Loading (I-ASH) as all of the ash removal activities are complete at the Dan River facility.
2. The cold solvent parts washer (I-77) is currently setting in a warehouse and is not used. We request that this be removed from the list.
3. The propane-fired emergency generator (I-66) is subject to NESHAP Subpart ZZZZ and NSPS Subpart JJJJ in the permit. It should be noted that the emergency generator was installed in 2007. Since this is after June of 2006 (end date for Subpart ZZZZ) and before July of 2008 (start date for Subpart JJJJ), the emergency generator may not be subject to either regulation. We feel that this is subject to NSPS, and request no changes.
4. The facility has a 1,000,000 gallon leachate tank for the ash landfill. There are no air emissions expected with this tank. The leachate contains no volatile compounds that would be emitted.
5. Insignificant Activity I-78 lists the leachate tank generator fuel tank capacity at 1100 gals. It is actually only 640 gals.

SSCB Comments and New Reporting Frequency Guidelines for CEMS-affected Facilities

1. On July 29, 2020, Samir Parekh provided suggested language for the PSD Avoidance condition 2.1.A.4.f for the NOx CEMS. This is changed from the old condition which would indicate compliance without using missing data substitution when fuel is burned, and it does not include emissions during startup, shutdowns and malfunction. Whereas, compliance should be with missing data substitution when fuel is burned, and it should include emissions during startup, shutdowns and malfunction.

   This change was sent to DEC on August 5, 2020, who was in the process of reviewing the draft permit:

   > The Permittee shall record and maintain records of the monthly nitrogen oxides emissions from these sources (ID Nos. ES-11 and ES-12) in a logbook (written or in electronic format) as follows:
   >
   > i. Emissions of nitrogen oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 15A NCAC 02D .0613 "Quality Assurance Program" and 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the Permittee has installed a NOx CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section.
   > ii. NOx CEMS data reported to meet the requirements of this section shall include data substituted using the missing data procedures in Subpart D of 40 CFR Part 75 except that unbiased values may be used. The missing data procedure shall be used whenever the emission unit combusts any fuel.
   > iii. Excess emissions shall be defined as any consecutive 12-month period that exceeds the annual NOx limit in Section 2.1.A.4.a above.
   > iv. Monitor downtime shall
   > (A) not exceed 5.0 percent of the operating time in a calendar quarter, and
   > (B) be calculated using the following equation:
   >
   > $$\%MD = \left(\frac{\text{Total Monitor Downtime}}{\text{Total Source Operating Time}}\right) \times 100$$
   >
   > Where:
   >
   > "Total Monitor Downtime" is the number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid, not available, or filled with the missing data procedure.
   >
   > "Total Source Operating Time" is the number of hours in a calendar quarter where the emission source associated with the CEMS was operating.
   >
   > v. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

2. On July 2, 2020, Samir Parekh suggested the following language for the PSD Avoidance reporting in Section 2.1.A.4.i.

   This change was sent to DEC on August 5, 2020, who was in the process of reviewing the draft permit:

   > The Permittee shall submit a semiannual summary report of emissions of the pollutants listed in Section 2.1.A.4.a above from each source (ID Nos. ES-11 and ES-12) postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. At a minimum, the report shall include:

i. The total emissions (as tons per consecutive 12-month period) for all sources based on the recordkeeping in Sections 2.1.A.4.d through g above. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
ii. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section for the turbines (ID Nos. ES-11 and ES-12). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

All instances of deviations from the requirements of this permit must be clearly identified.

The following two comments were incorporated in accordance with new SSCB guidelines on July 31, 2020, for NSPS, SIP, NESHAP and MACT sources with CEMS to request sources using CEMS to report emissions and monitor system performance on a quarterly rather than semiannual basis for NSPS and SIP-affected sources.

These changes were sent to DEC on August 13, 2020, who was in the process of reviewing the draft permit:

3. Section 2.1.A.3.h
The Permittee shall submit reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. [§60.4375(a), §60.4380(c) and §60.4395]

4. Section 2.1.A.4.f.v
The Permittee shall submit reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions.

IX. Recommendations

TBD after public notice.